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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/685,472

10/16/2003

Ashvinkumar Jayantilal Sanghvi

MFCP.107184

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45809

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03/28/2008

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EXAMINER

GOODCHILD, WILLIAM J

ART UNIT

PAPER NUMBER

2145

MAIL DATE

DELIVERY MODE

03/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/685,472	Applicant(s) SANGHVI, ASHVINKUMAR JAYANTILAL	
	Examiner WILLIAM J. GOODCHILD	Art Unit 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/21/2005, 10/23/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 9, 18 and 27-41 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim(s) 28-41 can be considered to be software: claim 28 refers to monitoring tools, updating signatures and an abnormality indicator, claim 34 refers to a signature creation module, a signature updating module and an abnormality detection module, each limitation can be accomplished in software. In order for a claim to be statutory, it must fall within a process, machine, manufacture, or a composition of matter. Software does not fall within a statutory category since it is not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

Claim(s) 9, 18 and 27 are drawn towards a computer readable medium having computer executable instructions. In accordance with Applicant's specification (page 7, paragraph 34, "computer readable media may comprise computer storage media and

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communication media.”), communication media is not further defined in the specification and generally may consist of a carrier wave. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. Instead, it includes a form of energy. Energy does not fall within a statutory category since it is clearly not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Spoerre et al., (US Publication No. 5,602,761), (hereinafter Spoerre).

Regarding claim 1, Spoerre discloses creating a signature representative of the process [column 5, lines 48-56]; continuously updating the created signature [column 5, lines 27-

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33]; detecting abnormalities based upon the continuously updated signature [column 5, lines 38-47].

Regarding claim 2, Spoerre discloses creating a signature comprises accelerated learning through incrementally increasing a learning responsiveness ratio [column 6, lines 8-18].

Regarding claim 3, Spoerre discloses creating a signature comprises calculating an average and a standard deviation [column 6, lines 8-18].

Regarding claim 4, Spoerre discloses creating a signature comprises initially repeating a running average and standard deviation through a plurality of intervals [column 8, lines 3-12 and column 6, lines 8-11].

Regarding claim 5, Spoerre discloses updating the created signature comprises using a weighting factor to ensure that recently recorded data has a greater impact than older data [column 10, lines 1-4].

Regarding claim 6, Spoerre discloses updating the created signature comprises utilizing a moving average over a time to account for events occurring at unexpected times [column 10, lines 1-29].

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Regarding claim 7, Spoerre discloses detecting abnormalities comprises determining if measured values are above an upper threshold or below a lower threshold [column 4, lines 34-45].

Regarding claim 8, Spoerre discloses calculating upper and lower threshold limits based on jitter offset [column 16, Table 3].

Regarding claim 9, Spoerre discloses a computer readable medium having computer executable instructions for performing the method of claim 1 [column 1, lines 43-54, column 18, lines 37-38 and column 5, lines 27-32].

Regarding claim 10, Spoerre discloses continuously monitoring a system parameter [column 5, lines 27-29]; computing a normal range of values for the system parameter based on the continuously updated signature [column 5, line 48 – column 6, line 7]; determining if the monitored system parameter is within the normal range [column 5, line 48 – column 6, line 7]; and indicating existence of an abnormality if the monitored system parameter is outside of the normal range [column 5, line 48 – column 6, line 7].

Regarding claim 11, Spoerre discloses creating a signature by calculating an average and a standard deviation [column 8, lines 3-12].

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Regarding claim 12, Spoerre discloses creating a signature comprises calculating an average and a standard deviation [column 6, lines 8-18].

Regarding claim 13, Spoerre discloses creating a signature comprises initially repeating the running average and standard deviation through a plurality of intervals [column 8, lines 3-12, column 6, lines 8-11].

Regarding claim 14, Spoerre discloses computing a normal range of values comprises using a weighting factor to ensure that recently recorded data has a greater impact than older data [column 10, lines 1-4].

Regarding claim 15, Spoerre discloses computing a normal range of values comprises utilizing a moving average over a time to account for events occurring at unexpected times [column 10, lines 1-29].

Regarding claim 16, Spoerre discloses determining whether a monitored system parameter is within a normal range of values comprises determining if monitored system parameters are above an upper threshold or below a lower threshold [column 4, lines 34-45].

Regarding claim 17, Spoerre discloses calculating upper and lower threshold limits based on jitter offset [column 16, Table 3].

Regarding claim 18, Spoerre discloses a computer readable medium having computer executable instructions for performing the method of claim 10 [column 1, lines 43-54, column 18, lines 37-38 and column 5, lines 27-32].

Regarding claim 19, Spoerre discloses setting a learning responsiveness ratio [column 10, lines 2-20]; monitoring a system parameter [column 5, lines 27-29]; adjusting the learning responsiveness ratio at fixed intervals until a desired value is reached [column 10, lines 2-20]; calculating an average and standard deviation for each interval [column 8, lines 3-12]; using the average, standard deviation and learning responsiveness ration to create the signature [column 5, line 57 – column 6, line 7].

Regarding claim 20, Spoerre discloses continuously updating the created signature [column 5, lines 27-33].

Regarding claim 21, Spoerre discloses detecting abnormalities based on the updated signature [column 5, lines 38-47].

Regarding claim 22, Spoerre discloses creating a signature comprises initially repeating the running average and standard deviation through a plurality of intervals [column 8, lines 3-12 and column 6, lines 8-11].

Regarding claim 23, Spoerre discloses updating the created signature comprises using a weighting factor to ensure that recently recorded data has a greater impact than older data [column 10, lines 1-4].

Regarding claim 24, Spoerre discloses updating the created signature comprises utilizing a moving average over a time to account for events occurring at unexpected times [column 10, lines 1-29].

Regarding claim 25, Spoerre discloses detecting abnormalities comprises determining if measured values are above an upper threshold or below a lower threshold [column 4, lines 34-45].

Regarding claim 26, Spoerre discloses calculating upper and lower threshold limits based on jitter offset [column 16, Table 3].

Regarding claim 27, Spoerre discloses a computer readable medium having computer executable instructions for performing the method of claim 19 [column 1, lines 43-54, column 18, lines 37-38 and column 5, lines 27-32].

Regarding claim 28, Spoerre discloses monitoring tools [column 5, lines 27-29] for continuously monitoring a system parameter; a continuously updated signature representative of normal values of the system parameter [column 5, lines 48-51]; an

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abnormality indicator calculated based on the continuously updated signature, the abnormality indicator including a range of normal values for the system parameter [column 5, line 57 – column 6, line 7].

Regarding claim 29, Spoerre discloses the continuously updated signature comprises an average and a standard deviation [column 8, lines 3-12].

Regarding claim 30, Spoerre discloses the continuously updated signature comprises a weighting factor to ensure that recently recorded data has a greater impact than older data [column 10, lines 1-29].

Regarding claim 31, Spoerre discloses the continuously updated signature comprises a moving average over time to account for events occurring at unexpected times [column 10, lines 1-29].

Regarding claim 32, Spoerre discloses the abnormality indicator determines whether a monitored system parameter is within a normal range of values and whether monitored system parameters are above an upper threshold or below a lower threshold [column 4, lines 34-45].

Regarding claim 33, Spoerre discloses the abnormality indicator calculates upper and lower threshold limits based on jitter offset [column 16, Table 3].

Regarding claim 34, Spoerre discloses a signature creation module [column 5, lines 48-56] for creating a signature representative of the process; a signature updating module [column 5, lines 27-33] for continuously updating the created signature; an abnormality detection module [column 5, lines 38-47] for detecting abnormalities based upon deviation from the updated signature.

Regarding claim 35, Spoerre discloses the signature creating module includes tools for calculating an average and a standard deviation [column 8, lines 3-12].

Regarding claim 36, Spoerre discloses the signature creation module comprises tools for performing accelerated learning through incrementally increasing a learning responsiveness ration [column 6, lines 8-18].

Regarding claim 37, Spoerre discloses creating a signature comprises initially repeating the running average and standard deviation through a plurality of intervals [column 8, lines 3-12 and column 6, lines 8-11].

Regarding claim 38, Spoerre discloses the signature updating module comprises a weighting factor to ensure that recently recorded data has a greater impact than older data [column 10, lines 1-4].

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Regarding claim 39, Spoerre discloses the signature updating module comprises tools for calculating a moving average over a time to account for events occurring at unexpected times [column 10, lines 1-29].

Regarding claim 40, Spoerre discloses the abnormality detection module determines if monitored system parameters are above an upper threshold or below a lower threshold [column 4, lines 34-45].

Regarding claim 41, Spoerre discloses the abnormality detection module includes a mechanism for calculating upper and lower threshold limits based on jitter offset [column 16, Table 3].

Regarding claim 42, Spoerre discloses monitoring a system parameter [column 5, lines 27-29]; converting a numeric data stream representative of the monitored system parameter to a state for the process [column 5, line 48 - column 6, line 7]; and distinguishing between normal and abnormal behavior based on the state [column 5, line 48 - column 6, line 7].

Regarding claim 43, Spoerre discloses converting the numeric data streams to multiple sub-states [column 5, lines 57- column 6, line 7].

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Regarding claim 44, Spoerre discloses determining a root cause of an abnormality based on the state [column 6, lines 56-65].

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM J. GOODCHILD whose telephone number is (571)270-1589. The examiner can normally be reached on Monday - Friday / 9:00 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WJG
03/10/2008

/Jason D Cardone/
Supervisory Patent Examiner, Art Unit 2145